CHAPTER 5: ENVIRONMENTAL MANAGEMENT ISSUES

5.1 ENERGY REQUIREMENTS AND CONSERVATION POTENTIAL OF THE ALTERNATIVES AND MITIGATION MEASURES

The alternatives are distinguished by the amount and/or locations of permitted bottomfish fishing in the NWHI. The industry consumes energy in the form of petroleum-based fuels and electricity. Because they eliminate fishing in the NWHI, Alternative 2 and, in the long-term, Alternative 3 would therefore conserve the greatest amounts of energy. To the extent that the size of the fishing industry is reduced under Alternative 4, that alternative would consume less energy than Alternative 1.

5.2 NATURAL OR DEPLETABLE RESOURCE REQUIREMENTS AND CONSERVATION POTENTIAL OF THE ALTERNATIVES AND MITIGATION MEASURES

The fishery exists to harvest natural resources. Alternative 2 and eventually Alternative 3 would therefore represent the greatest conservation potential, if effort is not relocated from the NWHI to the MHI. If effort is relocated to the MHI, the localized depletions of *onaga* and *ehu* stocks in the MHI could be exacerbated. If and to the extent that fishing effort and harvest levels are reduced under Alternative 4, that alternative would have greater conservation potential than Alternative 1.

5.3 URBAN QUALITY, HISTORIC AND CULTURAL RESOURCES AND DESIGN OF THE BUILT ENVIRONMENT INCLUDING THE REUSE AND CONSERVATION POTENTIAL OF THE ALTERNATIVES AND MITIGATION MEASURES

None of the alternatives would have an appreciable effect on urban quality or design of the built environment because of the small size of the bottomfish fishing fleet and its shoreside supporting infrastructure.

Commercial bottomfish fishing has been occurring in the waters around the NWHI for nearly ninety years and is an important component of Hawai‘i’s fishing industry (Sections 3.5.1 and 3.7.1). In eliminating the NWHI bottomfish fishery Alternatives 2 and 3 would reduce the diversity and economic viability of the commercial fishing life way in Hawai‘i and diminish the influence of Hawai‘i’s maritime culture.

The preservation of the endangered Hawaiian monk seal has social and cultural significance for some segments of the public (Section 3.3.4). Alternatives 2 and 3 would eliminate any effects that the NWHI bottomfish fishery may have on this species. Alternatives 4A and 4B would mitigate fishery effects by spatially separating bottomfish fishing operations from Hawaiian monk seal breeding areas.

Natural and energy resources conservation potentials of the alternatives are discussed above. The

reuse potential of the alternatives is related to the potential for re-direction of asset use. To the extent that vessels and gear are inappropriate and inefficient in other applications,

Alternatives 2 and 3 would have less reuse potential than Alternatives 1A, 1B and 4A, 4B.

5.4 POSSIBLE CONFLICTS BETWEEN THE PROPOSED ACTION AND OTHER LAND USE PLANS

The preferred alternative considered in this EIS does not conflict with the objectives nor provisions of the Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve because the existing FMP provides for a sustainable fishery with little bycatch and minimal effect on protected species or ecosystem integrity. In addition, NWHI bottomfish limited entry participants must comply with all management regimes operating in the NWHI.

5.5 ADVERSE IMPACTS THAT CANNOT BE AVOIDED

Alternatives 1A and 1B would continue the low levels of risk of harm to protected species arising from the bottomfish fishery in the NWHI. Alternatives 2 and ultimately Alternative 3 would eliminate this risk to protected species, but substitute unavoidable impacts to human communities in the form of social, economic and cultural effects. Alternatives 4A and 4B reduces risks of fishing interactions with protected species, while minimizing adverse impacts on the human community.

5.6 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE HUMAN ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The elimination of bottomfish fishing in the NWHI under Alternative 2 or 3 would allow target and bycatch stocks in the NWHI to return to equilibrium with forces of natural mortality, and provide an increased opportunity for larval recruitment to parts of the archipelago with depleted stocks. The same would be true of Alternatives 4A and 4B, to the extent that the Preservation Zones decrease archipelago-wide effort. Given that bottomfish stocks are not overfished archipelago-wide, however, Alternatives 1A and 1B (and Alternative 4 in the absence of effort reduction) would not compromise long-term productivity of these stocks for short-term uses.

5.7 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES INVOLVED IN THE PROPOSED ACTION

Non-renewable resources consumed in the industry include the energy used in fishing operations and ancillary businesses, and the materials used to construct the physical assets used in the industry, although some of the latter would be available for reuse if taken out of use in

bottomfish fishing.

5.8 PERMITS, LICENSES AND APPROVALS NECESSARY TO IMPLEMENT THE PROPOSED ACTION

Alternative 1A is the current management regime under the Bottomfish and Seamount Groundfish FMP. A new Biological Opinion was released in March 2002; however, that BiOp does not authorize incidental taking of Hawaiian monk seals. NMFS is in the process of making a decision about whether to authorize incidental take of monk seals by this fishery under the MMPA § 101(a)(5)(E), which would require a determination that the fishery's impacts on monk seals is negligible. The measures proposed under Alternative 1B require approval and implementation by NMFS. Alternatives 2 and 3 could be implemented through the FMP amendment process of the Council. The management, administration and enforcement of the zoning designations of Alternative 4 would require the cooperation of the State of Hawai‘i and the U.S. Departments of the Interior and Commerce.